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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/668,071	09/22/2000	Kouji Fujiwara	49940(868)	1421

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EXAMINER

NGUYEN, HAU H

ART UNIT PAPER NUMBER

2674

DATE MAILED: 09/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/668,071

Applicant(s)

FUJIWARA ET AL. 

Examiner

Hau H Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1- 6, 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takezaki (US Patent No. 5,880,704).

Referring to claims 1, 8, 10 and 11, Takezaki discloses a three-dimensional image display device comprises a display unit for displaying an image, a display control unit for controlling the display unit, a screen shutter unit comprising a plurality of long and narrow vertical slits arranged horizontally from left to right, and a shutter control unit for controlling the screen shutter unit. As shown in Fig. 1, the screen shutter unit 1 comprises a plurality of shutters (1a, 1a,...) each of which is a long narrow shutter strip 1a to transmit or intercept rays and is positioned in parallel with the vertical direction of the screen (indicated by arrow Y) and at equal intervals along the horizontal direction of the screen (indicated by arrow X). The display control unit 4 synchronizes with the movement of the slits (1b, 1b,...) controlled by the shutter control unit 2. The shutter control unit 2 drives the screen shutter unit 1, controlling as long and narrow ray passing slits 1b only a plurality of shutters selected at predetermined intervals from the shutters (1a, 1a, ...). The entire position of the slits (1b, 1b, ...) comprising a plurality of slits is moved horizontally at a specified time intervals (col. 5, ln 15-50), and thus blocking the image for a predetermined time. The display unit 3 can be a self-emitting display device, for

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example, a back-light liquid crystal display device, a CRT display device, an EL display device, a plasma display device, etc., for emitted rays to display an image (col. 6, ln 8-34). As shown in Figs. 19 and 20, the shutter unit 1 is liquid crystal shutter.

In regard to claims 2-4 and 12, Takezaki teaches the display unit 3 can be one of various well-known image display devices such as a CRT display device, a liquid crystal display device, an electro-luminescent (EL) display device, a plasma display device, etc. (col. 5, ln 34-36); therefore, it can be a transmission-type or reflection type liquid crystal device. As cited above, the shutter unit can either transmit or intercept light.

Referring to claim 5, it is feasible to fabricate the shutter strips with alternate light transmitting and light intercepting portion as cited above into an endless belt.

As for claims 6 and 13, since liquid crystal projection device is well known in the art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add an optical system to the liquid crystal image display device taught by Takezaki in order to magnify and projecting light.

As for claim 9, since the display control unit, as taught by Takezaki, synchronizes with the movement of the slits controlled by the shutter control unit, it is possible to arrange the slits in order to shut off the displayed image between frames.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takezaki (US Patent No. 5,880,704) in view of Takahashi et al. (US Patent No. 5,654,756).

Takezaki teaches all the limitations of claim 7, as applied to claim 1 above, except for the image display device carries out image display in synchronization with a vertical sync signal having constant cycle and the shield member is driven in synchronization with vertical sync

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signal. However, Takahashi et al. teach a control circuit 9 in the converting unit 5 is supplied with a vertical synchronous signal V-SYNC from the image pick-up 4 and the vertical sync has a constant cycle as shown in Fig. 7 and 8. Since the shutter unit taught by Takezaki is arranged in vertical shutter strip as cited above, it would have been obvious to add the control circuit taught by Takahashi et al. into the driving circuit taught by Takezaki in order for the circuit to be able to write image to the memory device (col. 6, ln 8-10) or to obtain a static color picture (col. 6, ln 29-31 of Takahashi et al.).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

Aoi (US Patent No. 4,641,157) discloses an image display device having an image display window, an endless photosensitive belt that can turn on and off a displayed image.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hau H. Nguyen whose telephone number is: 703-305-4104. The examiner can normally be reached on MON-FRI from 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 703-305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

or faxed to:

Art Unit: 2674

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose
telephone number is (703) 306-0377.

H. Nguyen

09/16/2002



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600